

## REMARKS

Claims 19-25, 27-29, 32-36, 38 and 39 were previously pending in the application. By the Amendment, Claims 19, 32 and 39 are currently amended and Claims 20-25, 27-29, 33-36 and 38 remain unchanged.

The claims stand rejected under the cited prior art of record. Specifically, Claims 19-25, 27-29 and 39 were rejected under 35 USC §103(a) as being unpatentable over US Patent No. 3,093,252 to Cahill (Cahill '252) in view of US Patent No. 3,700,500 to Lemelson (Lemelson '500). Claims 32-36 and 38 were rejected under 35 USC §103(a) as being unpatentable over Cahill '500 in view of Lemelson '500 and further in view of US Patent No. 4,736,971 to McManus (McManus '971).

Applicant respectfully traverses the above rejections and submits to the contrary that the present claimed invention is neither anticipated nor rendered obvious by any of the cited references, taken singly or in any combination.

Independent Claim 19 is directed to an apparatus for at least one of loading and unloading multi-piece goods units into and out of a transport compartment in a loading and unloading direction. Also included are plurality of beam guide members fixed to an overhead support structure and a unitary traveling support beam operatively connected to the beam guide members for reciprocating travel into and out of the transport compartment. At least two gripping units are provided and are operatively mounted to the unitary support beam for movement therewith and disposed in spaced succession therealong for movement into and out of the transport compartment. Each gripping unit includes a laterally oriented crossbeam and two fixed length elongate legs mounted to said crossbeam and being movable with respect to one another, the

multi-piece goods units being clamped between the two fixed length elongate legs in general centered alignment with respect to the support beam when the gripping unit engages the multi-piece goods units. Further, at least two lifting units are mounted to the crossbeam for lifting the multi-piece goods units in a generally vertical direction perpendicular to the loading and unloading direction for movement of the multi-piece goods units into and out of the transport compartment.

According to independent Claim 32, each gripping unit includes two fixed length elongate legs which are moveable with respect to one another. The multi-piece goods units are clamped between the two legs and the gripping unit engages the multi-piece goods units. At least two lifting units are provided and mounted intermediate the for lifting the multi-piece goods units in a generally vertical direction perpendicular to the loading and unloading direction for movement of the multi-piece goods units into the transport compartment, release of the goods units and retraction of the traveling support beam from the transport compartment, or the opposite movement for unloading a transport compartment.

The apparatus additionally includes a plurality of beam guide members fixed to an overhead support structure and a unitary traveling support beam operatively connected to the beam guide members and extending in a substantially horizontal direction for reciprocating travel into and out of the transport compartment for depositing the multi-piece good units in the transport compartment or retrieval of multi-piece good units from the transport compartment.

A crossbeam extends in a direction substantially transverse to the support beam, is mounted operatively thereto, and includes a first end and a second end disposed opposite the first end. A first fixed length elongate leg is connected to

the first end of the crossbeam and extends downwardly in a substantially vertical direction from the crossbeam. A second fixed length elongate leg is connected to the second end of the crossbeam and extends downwardly in a substantially vertical direction from the crossbeam, with the first and second legs having respective length dimensions sufficient to extend beyond individual pieces of the multi-piece good units and being movable toward one another to clamp the goods units and away from one another to release the multi-piece goods units. A hydraulic cylinder is connected to the crossbeam and the support beam with the cylinder being movable between a retracted condition in which the crossbeam is moved toward the support beam to lift the multi-piece good units and an extended condition in which the crossbeam is moved away from the support beam to lower the multi-piece goods units.

Independent Claim 39 is directed to a method for moving multi-piece good units between a loading region and a transport compartment. The method includes the steps of providing a conveying unit including a plurality of beam guide members fixed to an overhead support structure, a unitary traveling support beam operatively connected to the beam guide members and extending in a substantially horizontal direction for reciprocating travel into and out of the transport compartment for depositing the multi-piece goods units in the transport compartment or retrieval of multi-piece goods units from the transport compartment, at least one gripping unit having a crossbeam and two fixed length elongate legs extending therefrom, with the legs being movable with respect to one another to engage the multi-piece goods units, and at least one lifting unit mounted to the crossbeam and connecting the gripping unit to the support beam.

The steps further include positioning the gripping unit adjacent to goods in at least one of a loading region and the transport compartment; engaging the goods units with the gripping unit by moving the legs toward one another to

clamp the goods units and apply opposing forces on opposite sides of the goods units; lifting the goods units with the lifting unit; moving the support beam thereby transporting the gripping unit and the multi-piece goods units to the other of the loading region and the transport compartment; lowering the multi-piece goods units back on the base with the lifting unit and, finally, disengaging the multi-piece goods units from the gripping unit by moving the legs away from one another to unclamp the multi-piece goods units.

The cited art of record fails to disclose every element of the claims of the present invention. Further, the cited art of record also fails to teach or suggest the present invention as claimed.

Cahill '252 teaches an automatic warehouse wherein goods are moved around using roller conveyors which support the goods from the bottom and hanging, gripping lifters that carry the goods around the warehouse on monorails. As seen Figure 1, the goods exit the warehouse via trucks and the goods get to those trucks on roller conveyors. The Official Action refers to conveying units 20 and 30 that were factors in the decision rendering the present invention obvious.

As seen in Figure 5-7 of Cahill '252, a first carriage 20 is used for directing goods across roller conveyors and is devoid of any mechanism for lifting the goods. Therefore, the reliance in the Official Action upon carriage 20 is misplaced. The second carriage 30 includes two gripping members that may be raised or lowered using a chain mechanism as seen in Figure 8. Nevertheless, these grippers are not fixed-length elongate legs as claimed in the present application. Further, the Cahill legs accomplish the lifting wherein the present invention includes a separate lifter mechanism that is disposed intermediate the crossbeam and overhead support member to lift the entire parcel of goods at

once without fear of the legs getting out of alignment thereby maintaining the integrity of the goods stack being moved.

According to Cahill '252, the legs are moveable simultaneously by a pair of chains, however, discontinuities in the pair of chains could cause one leg to move faster than the other causing the load to destabilize and therefore pose a hazard to goods and personnel. Accordingly, the Cahill '252 reference teaches away from using a central lifter as described and claimed in the present invention.

Based on the foregoing it is apparent that Cahill '252 does not disclose the elements of the present invention in a manner described in the Official Action to assertedly render the present invention obvious when combined with Lemelson '500. Further, the deficiencies of Cahill '252 are not cured by Lemelson '500 and therefore, the combination of Cahill '252 and Lemelson '500 does not result in the present invention. Accordingly, the combination of Cahill '252 and Lemelson '500 cannot be used to render the present invention obvious.

In addition, McManus '971 does nothing to cure the deficiencies of either Cahill '252 or Lemelson '500. Notably, the gripper of McManus '971 includes one fixed member and one moveable member and therefore, McManus '971 does not include elongate legs being movable with respect to one another and is not adaptable to move large, multiple piece loads that require some form of balancing to achieve smooth operation of the device causing the movement which is achieved in the present invention by symmetric load gripping action, an act that the McManus '971 device cannot perform.

Based on the foregoing, it can be seen that neither Cahill '252, Lemelson '500 and McManus '971 disclose, teach or suggest the present invention, taken

single or in any combination and cannot be used to render the present invention obvious.

For these and other reasons, Cahill '252 and Lemelson '500, either alone or in combination, do not teach or suggest the subject matter defined by independent Claims 19 and 39. Therefore, Claims 19 and 39 are allowable. Claims 20-25 and 27-29 depend from Claim 19 and are allowable for the same reasons and also because they recite additional patentable subject matter.

For these and other reasons, Cahill '252, Lemelson '500 and McManus '971 either alone or in any combination, do not teach or suggest the subject matter defined by independent Claim 32. Therefore, Claim 32 is allowable. Claims 33-36 and 38 depend from Claim 32 and are allowable for the same reasons and also because they recite additional patentable subject matter.

**CONCLUSION**

In view of the above, entry of the present Amendment and allowance of Claims 19-25, 27-29, 32-36, 38 and 39 are respectfully requested. If the Examiner has any questions regarding this amendment, the Examiner is requested to contact the undersigned. If an extension of time for this paper is required, petition for extension is herewith made.

Respectfully submitted,



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